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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,576	03/05/2002	Kristina Helena Valborg Hedengren	RD-27247-4	8635

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GENERAL ELECTRIC COMPANY  
GLOBAL RESEARCH  
PATENT DOCKET RM. BLDG. K1-4A59  
NISKAYUNA, NY 12309

EXAMINER

FOREMAN, JONATHAN M

ART UNIT	PAPER NUMBER
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3736

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/090,576

Applicant(s)

HEDENGREN ET AL.

Examiner

Jonathan ML Foreman

Art Unit

3736

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6-8,10,11 and 13-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6-8,10,11 and 13-18 is/are rejected.
- 7) ☒ Claim(s) 2 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 4, 6, 7, 16 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,117,088 to Kreizman et al.

In regards to claims 1, 3, 4, 6, 7, 16 and 17, Kreizman et al. discloses a rod (Figures 5A, 5B) with an outer insulating layer (12) having a plurality of spaced holes (Col. 3, lines 36 – 37) at one end and a common electrical input lead (26f) comprising a strip of electrically conductive material (Col. 3, lines 54 – 64) disposed below the holes and having portions exposed at the holes. A plurality of thermal sensors (18a-18e), placed in the holes and in a linear array, is in electrical contact with the common electrical lead and a plurality of output leads (20a-20e). See Fig. 1D. A means for collecting output signals (72) is illustrated in Fig. 8B. Kreizman et al. discloses an exterior insulating layer (Col. 5, lines 53 – 55).

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3736

4. Claims 8, 10, 11 and 13 - 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,117,088 to Kreizman et al. in view of U.S. Patent No. 5,226,426 to Yoon.

In regards to claims 8, 10, 11 and 13 – 15 a rod (Figures 5A, 5B) with an outer insulating layer (12) having a plurality of spaced holes (Col. 3, lines 36 – 37) at one end and a common electrical input lead (26f) comprising a strip of electrically conductive material (Col. 3, lines 54 – 64) disposed below the holes and having portions exposed at the holes. A plurality of thermal sensors (18a-18e), placed in the holes and in a linear array, is in electrical contact with the common electrical lead and a plurality of output leads (20a-20e). See Fig. 1D. A means for collecting output signals (72) is illustrated in Fig. 8B. Kreizman et al. discloses an exterior insulating layer (Col. 5, lines 53 – 55). Kreizman et al. discloses inserting the rod into biological matter (Col. 4, lines 50 – 53). However, Kreizman et al. do not teach a hollow needle to receive the measuring probe. Yoon discloses a hollow needle insertable into biological matter and adapted to receive a probe (See abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the assembly of Kreizman et al. with the hollow needle of Yoon to facilitate placement of sensors in the tissue.

5. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,117,088 to Kreizman et al. as applied to claims 16 and 17 above, and further in view of U.S. Patent No. 6,086,247 to von Hollen.

In regards to claim 18, Kreizman et al. teach a method as recited for claims 16 and 17 but do not teach determining what type of tumor may exist. Van Hollen discloses a method of measuring temperature to determine the presence and type of a tumor. See col. 4, 11. 40-51. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the

Art Unit: 3736

method of Kreizman et al. with the step of determining what type of tumor may exist, as taught by van Hollen to facilitate diagnosis.

### ***Response to Arguments***

6. Applicant's arguments filed 8/26/04 have been fully considered but they are not persuasive. Applicant has asserted that Kreizman et al. fails to teach a common electrical input lead extending between the end portions of the rod and disposed below the holes and having portions exposed at said holes, a plurality of spaced apart thermal sensors formed within each one of the holes in electrical contact with the common electrical input lead and a plurality of output leads each mounted to the outer insulating layer and in contact with a different one of said sensors. However the Examiner disagrees. Kreizman et al. clearly discloses such a rod. Figure 1D shows a plurality of temperature sensors (18a – 18e). Each sensor is connected to an output lead. Figure 1C shows how each sensor is positioned within a hole of the insulating layer (12). Kreizman et al. discloses a common input lead disposed below the holes and contacting each sensor (Col. 3, lines 54 – 64). Additionally, Applicant has asserted that the thermocouple junctions as disclosed by Kreizman et al. are not sensors. However the Examiner disagrees. The junctions, as pointed out by Applicant, generate a voltage that is a function of temperature. A sensor is a device that responds to a physical stimulus and transmits a resulting impulse (Webster's Collegiate Dictionary, 10<sup>th</sup> ed). Here the physical stimulus is heat energy and the impulse is the generation of voltage. Furthermore, the present application refers to thermocouple junctions as sensors on page 10, lines 4 – 6.

### ***Allowable Subject Matter***

7. Claims 2 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any

Art Unit: 3736

intervening claims. The prior art does not teach a temperature probe having a common electrical input lead in the form of a hollow tube.

### *Conclusion*

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 6,162,184 to Swanson et al. and U.S. Patent No. 6,511,478 to Burnside et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan ML Foreman whose telephone number is (571)272-4724. The examiner can normally be reached on Monday - Friday 8:00 am - 4:30 pm.

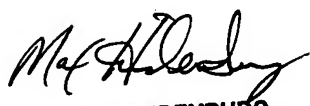
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571)272-4726. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3736

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JMLF



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